

Claims

1. Ball-and-socket joint comprising a joint housing (1), a ball head (2) with ball pivot (3), a bearing shell (4) disposed between ball head (2) and joint housing (1) and a housing cover (5), characterized in that

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 a compressive force produced between the housing cover (5) and at least a portion of the bearing shell (4) and acting in axial direction of the ball pivot (3) permanently acts on this portion of the bearing shell (4) and presses it into the gap between ball head (2) and joint housing (1).

2. Ball-and-socket joint as claimed in Claim 1, characterized in that a disk (6) is arranged between the housing cover (5) and the bearing shell (4), wherein both the housing cover (5) and the disk (6) have an outwardly facing trapezoidal curvature.

3. Ball-and-socket joint as claimed in <sup>Claim 1</sup> ~~Claims 1 and 2~~, characterized in that the housing cover (5) is made of a plastically deformable material and is axially deformable in direction of the ball pivot (3).

4. Ball-and-socket joint as claimed in <sup>Claim 1</sup> ~~any one of Claims 1 to 3~~, characterized in that in the assembled state of the ball joint the inside of the housing cover (5), in the area of the trapezoidal curvature, fits against the disk (6) and contacts it over the full area.

5. Ball-and-socket joint as claimed in Claim 1, characterized in that between the housing cover (5) and the bearing shell (4) a spring (9) is arranged that is supported against the joint housing (1) via the housing cover (5).

6. Ball-and-socket joint as claimed in <sup>Claim 1</sup> ~~Claims 1 and 5~~, characterized in that the contact area of the bearing shell (4) is made as a deformable area (24)

which has a tolerance compensating effect on the axial position of the shell when the joint is assembled.

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7. Ball-and-socket joint as claimed in ~~any one of Claims 1, 5 and 6,~~ <sup>Claim 1</sup> characterized in that the spring (9) is a single- or multi-layered trapezoidal disk spring with an outwardly facing curvature.
8. Ball-and-socket joint as claimed in ~~any one of Claims 1 and 5 to 7,~~ <sup>Claim 1</sup> characterized in that a disk (6) is arranged between the disk spring (9) and the bearing shell (4).
9. Ball-and-socket joint as claimed in ~~any one of the preceding claims,~~ <sup>Claim 1</sup> characterized in that the spring (9) is an elastic ring made of rubber.
10. Ball-and-socket joint as claimed in ~~any one of the preceding claims,~~ <sup>Claim 1</sup> characterized in that the joint housing (1) has a conically formed inside contour and the bearing shell has a corresponding outside contour.
11. Ball-and-socket joint as claimed in Claim 1, characterized in that the bearing shell (4) is made in two parts and is divided into an upper shell (14, 15) and a lower shell (13).
12. Ball-and-socket joint as claimed in Claim 11, characterized in that a spring element is arranged in axial direction between upper shell (14, 15) and lower shell (13).
13. Ball-and-socket joint as claimed in Claim 12, characterized in that the spring element is a wave-shaped spring washer (16).
14. Ball-and-socket joint as claimed in ~~any one of Claims 11, 12 and 13,~~ <sup>Claim 11</sup> characterized in that the upper shell (14, 15) on the housing cover side has a collar (17) which in the assembled state of the ball-and-socket joint is

wedged between the housing cover (5) and a shoulder (20) of the housing (1).

15. Ball-and-socket joint as claimed in Claim 14, characterized in that the collar (17) has deformable areas (21, 22) which during assembly of the joint have a tolerance-compensating effect on the axial position of the upper shell (14, 15), the spring element (16) and the lower shell (13).

16. Ball-and-socket joint as claimed in <sup>3</sup> ~~any one of Claims 1 to 15~~ <sup>Claim 1</sup>, characterized in that the area (23) of the bearing shell (4) facing in the direction of the ball pivot (3) is preferably cylinder-shaped prior to assembly and is brought into its ball shape after assembly.

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